

CLARK'S MARSH WREN (*Cistothorus palustris clarkae*)

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Criteria Scores

Population Trend	Range Trend	Population Size	Range Size	Endemism	Population Concentration	Threats
15	0	7.5	10	10	0	5

Special Concern Priority

Currently considered a bird species of special concern (year round), priority 2. Not included on any previous list.

Breeding Bird Survey Statistics for California

Data inadequate for trend assessment (Sauer et al. 2000).

General Range and Abundance

Cistothorus palustris clarkae has a narrow distribution along the coast of southern California from the Los Angeles basin south to the Mexican border. Within this range, it is quite localized, though sometimes common where it occurs. In winter (late September-early April), this resident subspecies is outnumbered in its range by migrant Marsh Wrens of the subspecies *C. p. pulverius* and *C. p. plesius* from the Great Basin region. There is one record from Mexico of Marsh Wrens inferred as *clarkae*, from Lagunita El Ciprés in Ensenada in June 1997 (M. U. Evans and K. Smeltzer pers. comm.).

Seasonal Status in California

Cistothorus palustris clarkae is sedentary. The only known example of dispersal across unsuitable habitat is a specimen from San Clemente Island, collected 13 November 1939 (LACM 19635, Unitt et al. 1996).

Historical Range and Abundance in California

The Marsh Wren was formerly “a common resident of swampy regions in the lowlands” of the Los Angeles basin (Willett 1912), this region presumably representing the historic core of the range of *Cistothorus palustris clarkae* (Unitt et al. 1996). Historical data from Orange County are too few to ascertain the preurbanization status of the Marsh Wren in that area, but on the basis of the former extent of freshwater marshes like Gospel Swamp, about 30 square miles (Hamilton and Willick 1996), the species was undoubtedly common in the western part of the county. The Marsh Wren was recorded as a nesting species at Riverside in 1878 (F. Stephens in Willett 1912) and could have nested elsewhere along the San Jacinto and Santa Ana rivers in Riverside County. In San Diego County, the only area where the Marsh Wren was known to nest before 1949 was San Luis Rey/Guajome Lake, east of Oceanside, and this site represents the southern limit of the species’ historic breeding range along the Pacific coast.

Recent Range and Abundance in California

With agricultural and urban development, the Marsh Wren has been restricted to only a few sites in Los Angeles and Orange counties, but it has spread southward in San Diego County. In Los Angeles County, six sites are currently known: two in the extreme west along Arroyo Sesquit, Torrance, Harbor Lake, Alamitos Bay, and along San Jose Creek in Diamond Bar (Los Angeles County bird atlas data, L. Allen pers. comm.). In Orange County, the only recent sites are Upper Newport Bay and the San Joaquin Marsh, Irvine (possibly over 100 pairs at each site), Huntington Central Park (fewer than 10 pairs, irregular), restored wetlands along the Santa Ana River in Anaheim east of Weir Canyon Road (fewer than 10 pairs, colonized in late 1980s, disappeared in 1996), and possibly Seal Beach National Wildlife Refuge (Hamilton and Willick 1996, Gallagher 1997). In western Riverside County, Marsh Wrens remain common all year in Prado Flood Control Basin along the Santa Ana River and occur locally along the river between Prado Basin and the city of Riverside (at least at Hidden Valley Wildlife Area at the western edge of the city of Riverside);

they summer also along Alberhill Creek where it enters Lake Elsinore and at San Jacinto State Wildlife Area near Lakeview (Unitt et al. 1996). Specimens from western Riverside County, still lacking, are needed to test whether this population represents *C. p. clarkae* or *aestuarinus*. A specimen from Point Mugu, Ventura County, is closer to *aestuarinus* though intermediate toward *clarkae* in crown pattern and rump and scapular color.

In northern San Diego County, the Marsh Wren summers at every coastal wetland from the San Mateo Creek mouth south to Los Peñasquitos Lagoon and extends inland along the Santa Margarita River valley as far as Fallbrook, along the San Luis Rey River valley as far as Couser Canyon between Bonsall and Pala, and less than 5 miles inland in the valleys of Escondido Creek, the San Dieguito River, and Los Peñasquitos Creek. There are isolated colonies around Lake Hodges, in Boden Canyon east of San Pasqual, in La Jolla Valley west of Rancho Bernardo, and at Miramar Lake. Sites in southern San Diego County are along the San Diego River in Mission Valley and Santee, at Lake Murray, along the Sweetwater River between National City and Chula Vista and at Sweetwater Reservoir, and in the Tijuana River valley (Unitt et al. 1996, San Diego County bird atlas data, 1997-2001). A few records of single individuals at scattered sites farther inland could represent pioneers of either *clarkae* or *aestuarinus*, which is resident in the Imperial Valley to the east.

Most of the subspecies' range in San Diego County represents colonization since 1950, largely since 1975. Several of the localities where the species now nests were well covered in the early 20th century by egg collectors who found no Marsh Wrens. Thus range expansion in San Diego County contrasts sharply with range restriction in Los Angeles and Orange counties.

Ecological Requirements

Cistothorus palustris clarkae is restricted to freshwater or brackish marshes dominated by bulrushes (*Scirpus*) or cattails (*Typha*). Its biology has not been studied in detail but does not appear to differ grossly from that of other subspecies of Marsh Wrens. The rest of this paragraph is based on data

from other subspecies, especially *pulverius*. Marsh plants other than *Scirpus* and *Typha*, such as *Juncus*, *Phragmites*, and *Arundo*, are of moderate to low value to nesting Marsh Wrens (Gutzwiller and Anderson 1987, Rosenberg et al. 1991). A canopy coverage of trees over 6 meters tall exceeding 30% renders a marsh unsuitable for nesting Marsh Wrens. The percentage of herbaceous cover in marshes used by nesting Marsh Wrens ranges from 50 to 100 (Verner 1964). Gutzwiller and Anderson (1987) inferred that percentages exceeding 80 are optimum. The birds nest in narrow strips of marsh along lakeshores, but nesting success along edges may be less than in the center of an extensive marsh, where predation is less (Leonard and Picman 1986). Bent (1948) wrote, under the subspecies *iliacus* of the northeastern United States, that “small, isolated marshes of less than an acre in extent are usually avoided,” but Gutzwiller and Anderson (1987a) found Marsh Wren nests in scattered 0.1-acre patches of marsh vegetation. Verner (1965) found territory size to vary widely, from 1800 square feet in eastern Washington to 38,700 square feet at Seattle; means for these two areas were 5000 and 15,000 square feet, respectively. Along the coast of Georgia, Kale (1965) recorded smaller territories, mean sizes ranges from 60 to 156 square meters at various sites. Territories tend to be larger as habitat suitability decreases (Welter 1935). Verner and Engelson (1970) found mean territory sizes in eastern Washington ranging from 516.8 square meters for unmated males to 685.3 square meters for bigamous males. Rosenberg et al. (1991) recorded densities up to 238 Marsh Wrens per 40 hectares in prime cattail/bulrush habitat along the lower Colorado River. *Cistothorus palustris clarkae* is capable of colonizing new marshes that grow up after disturbance, as in old borrow pits in the Tijuana River valley or in a revegetation project in Mission Valley (pers. obs.).

Threats

Draining of marshes for agriculture and urban development has long been the primary factor affecting the Marsh Wren in coastal southern California. Stream channelization, flooding under reservoirs, overpumping of ground water, and use of valley floors for sand mining are also

widespread negative factors. Proliferation of *Arundo donax*, serious along many of southern California's rivers, degrades Marsh Wren habitat. New habitat is often created when cattails and bulrushes colonize reservoirs, but fluctuations in levels of these reservoirs often eliminate the habitat. At some reservoirs cattails and bulrushes are cut deliberately. Urban runoff is now the primary source of water supporting marshes with *C. p. clarkae*, raising questions about the effects of water quality.

Management and Research Recommendations

- Maintain and restore freshwater marshes.
- Use wastewater more creatively to enhance and create freshwater marshes, as through installation of bioremediation ponds.
- Remove concrete floors from drainage channels.
- Investigate subspecies identification of Marsh Wrens breeding in western Riverside County, through collection of specimens in late August and early September.
- Investigate nesting success and population dynamics of Marsh Wrens in marshes of various configurations (narrowly linear versus extensive).

Monitoring Needs

Though the distribution of *C. p. clarkae* is known fairly well, its numbers are not. A rangewide survey for baseline data is desirable, followed at intervals of several years by follow-up surveys. If these surveys reveal a decline, investigation into the causes would be warranted. A wait-and-see approach is suggested by the species' biology and the subspecies' recent distributional trend, which suggest that numbers of *C. p. clarkae* likely vary in tandem with the amount of freshwater marsh habitat and that if further loss of this habitat is arrested the subspecies can maintain itself.

Acknowledgments

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